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Involvement of Iron in Biofilm Formation by Lactobacillus rhamnosus

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Abstract

© 2016, Springer Science+Business Media New York.We investigated the effect of high iron availability on growth and biofilm formation of Lactobacillus rhamnosus strain BB. Biofilm development by L. rhamnosus BB was significantly increased by adding iron into the MRS medium, while bacterial growth was not affected. Iron chelator EDTA had no effect on L. rhamnosus BB growth and biofilm formation, but prevented the stimulation of biofilm development by iron. Our results are the first evidence of iron involvement in biofilm formation by lactobacilli—bacteria that were considered to be iron independent with poor biofilm formation capacity.

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Keywords

Biofilm, Iron, Lactobacillus rhamnosus

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